

APPENDIX A

[FILED UNDER SEAL]

APPENDIX A – Chart of Malkiewicz Opinions that Mr. Grande Rebuts

Challenged Grande Opinions	Cited Malkiewicz Opinions
<p>“The Malkiewicz Report’s opinion that Google placed custodians (more than the agreed-upon list) on timely, sufficient litigation holds is incorrect.” Grande Rep. § XV, ¶¶ 103–115.</p> <p>Google specifically argues the following are “new”:</p> <p>“It is my opinion that Google did not institute timely litigation holds in accordance with industry standards and practices (putting some employees on hold years after Google had an obligation to preserve) and in some instances misrepresented to the States when custodians were placed on litigation hold.” ¶ 104</p> <p>“It is my opinion that Google was aware of, and anticipated litigations and government investigations related to their acquisitions in the display ad business as early as 2006, but certainly no later than 2013.” ¶ 106</p> <p>“Whatever date upon which the Court finds that a litigation hold was triggered to preserve documents, the result is the same – Google failed to comply with its preservation obligations and many potentially responsive Google Chats were not preserved.” ¶ 107</p> <p>“Based on the description provided in the [redacted] litigation holds, it is unlikely that every Google employee under a litigation hold could determine what was relevant to this case.” ¶ 111.</p>	<p>“Prof. Hochstetler states that ‘by the beginning of 2022, 141 Google employees had been placed on litigation hold.’ This statement is not accurate as written. ... Prof. Hochstetler cites a letter in which Google provided information about legal holds placed for Google employees who were agreed-upon custodians, many of whom were placed on hold <i>after</i> ... the beginning of 2022... Prof. Hochstetler also ignores that Google placed many employees on hold (and thus suspended normal preservation processes for their documents), even if they were not agreed-upon custodians in this case.” Malkiewicz Rep. at ¶ 20.</p> <p>“Beginning in September 2019, Google issued litigation hold notices to numerous Googlers in connection with Plaintiffs’ investigation and subsequent litigation. Those litigation hold notices instructed Googlers to ‘not use’ Google Chat or any other ‘messaging apps to discuss any topics covered’ by their legal holds, but that, if they ‘must do so,’ to ‘make sure the settings preserve the messages, such as switching ‘history on.’” Malkiewicz Rep. at ¶ 31.</p> <p><i>Additional Malkiewicz Opinions that Grande’s § XV Explains, Repels, Counteracts, or Disproves</i></p> <p>Prof. Hochstetler’s suggestions “that Google’s information governance practices are unusual or cannot be explained by Google’s business judgment alone ... lack basis.” Google’s “information governance practices are widespread” and “many Plaintiff States have adopted similar.” Malkiewicz Rep. at ¶ 21.</p>

<p>“Google’s refusal to set its corporate default Chat History setting to ‘on’ even for litigation holds, is not aligned with information governance and litigation hold industry standards and practices.” ¶ 113</p>	<p>Google’s data management policies are “normal and sensible” under the principles set forth by The Sedona Conference. Malkiewicz Rep. at ¶ 23.</p> <p>Google employees’ deposition testimony “showed that they had an understanding of, and compliance with, the instructions given in the litigation holds as they pertain to Chat.” Malkiewicz Rep. at ¶ 62.</p> <p>“[T]he more plausible explanation for the fact that history is switched off at various times is that the nature of the discussion did not pertain to matters relevant to this litigation. There is evidence in the record that custodians understood their obligations.” Malkiewicz Rep. at ¶ 87.</p> <p>With respect to Google’s 2020 change in the retention period for new Google Chat rooms from indefinite to 18 months; “changes in data policies of this nature were not uncommon in this timeframe.” Malkiewicz Rep. at ¶ 28.</p> <p>That “Prof. Hochstetler did not list these litigation hold notices [set out in ¶ 31] in his materials relied upon or considered” is one of the “various flaws in Prof. Hochstetler’s analysis.” Malkiewicz Rep. at ¶ 30.</p> <p>Plaintiffs have received the benefit of 202 custodians agreed across this case. Malkiewicz Rep. at ¶ 18.</p>
---	---

Challenged Grande Opinions	Cited Malkiewicz Opinion
<p>“The Malkiewicz Report’s opinion that Google’s modification of the Google Chat retention policies and settings was hard and expensive because it required ‘hundreds of hours to develop and deploy’ across ‘multiple teams,’ and thus Google should be excused for not doing it earlier, is incorrect.” Grande Rep. § IX, ¶¶ 76–88.</p> <p>Google specifically argues the following are “new”:</p> <p>“It is my opinion that Google’s response to why it did not [preserve Google Chats for litigation hold recipients as it had allowed customers to do as early as 2015] ... is not persuasive nor a reason to violate an obligation to preserve.” ¶¶ 82-83.</p> <p>“It is my opinion that Google surely had the ability to set up Google Chat to preserve messages in whatever manner it desired.” ¶ 85.</p> <p>“[I]t is my opinion that [the February 2023] change did not entirely remove Google’s issues with preservation of Google Chat messages; that change only applied to Google employees under a litigation hold.” ¶ 88.</p>	<p>On February 8, 2023, the settings for all Google Chat messages were automatically defaulted to “history on” and the ordinary course retention period varied from 30 days to 18 months, depending on the type of message. Also, for any Chat conversation involving an individual who was subject to a litigation hold, such setting could not be toggled to ‘history off’ and those messages were retained for the duration of the hold. Google’s corporate representative has testified in this case that this ‘Google-specific change’ required ‘hundreds of hours to develop and deploy’ across ‘multiple teams.’” Malkiewicz Rep. at ¶ 25.</p>
	<p><i>Additional Malkiewicz Opinions that Grande’s § IX Explains, Repels, Counteracts, or Disproves</i></p> <p>“[I]t is normal and sensible for companies to have data management policies that permit routine deletion of data ... [to] balance the business value against the cost ... associated with retaining information.” Malkiewicz Rep. at ¶ 23.</p> <p>“There is no technical method to preserve messages sent in a ‘history off’ state.” Malkiewicz Rep. at ¶ 30.</p> <p>“Prof. Hochstetler’s assertion that ‘it would not have been difficult for Google to restrict its own employees using Google Chat from changing Retention Settings at an automated level’ is misleading. While Google’s Chat tool permits administrators to change the history setting for all users within an organization, Mr. Lopez testified that ‘it’s much more difficult to only have that change apply to a subset of all the employee population.’” Malkiewicz Rep. at n. 45.</p>

Challenged Grande Opinions	Cited Malkiewicz Opinion
<p>“The Malkiewicz Report’s opinion that the kinds of information governance practices that were applied to Google Chats in this case ‘are widespread’ and generally accepted is incorrect.” Grande Rep. § VII(A), ¶¶ 53–69</p> <p>Google specifically argues the following are “new”:</p> <p>“Malkiewicz asserts that the same information governance practices used by Google (i.e., instituting a History “off” setting that makes it likely that Google Chat messages can never be retained, even if a participant is under a litigation hold, opting not to retain potentially relevant Google Chat messages) are not unusual but ‘...are widespread in my experience.’ It is my opinion that this is NOT industry practice.” ¶ 54.</p> <p>“...Google’s decision to determine retention schedules that are applicable to litigation hold recipients, based on the documents’ ‘substantive business value’ to Google is not aligned with eDiscovery standards or practices and does not comport with the preservation obligations set by federal law.” ¶ 58</p> <p>“It is my opinion that it is also not credible for a company as large as Google to make the assumption that Google Chats sent or received by their employees have no ‘substantive business value’ and therefore do not need to be preserved.” ¶ 60</p>	<p>Prof. Hochstetler’s suggestions “that Google’s information governance practices are unusual or cannot be explained by Google’s business judgment alone ... lack basis.” Google’s “information governance practices are widespread” and “many Plaintiff States have adopted similar.” Malkiewicz Rep. at ¶ 21.</p>
	<p><i>Additional Malkiewicz Opinions that Grande’s § VII(A) Explains, Repels, Counteracts, or Disproves</i></p>
	<p>Many of the agreed-upon custodians in this case “were placed on hold <i>after</i> ... the beginning of 2022” and “Google placed many employees on hold (and thus suspended normal preservation processes for their documents), even if they were not agreed-upon custodians in this case. Malkiewicz Rep. at ¶ 20.</p> <p>“Many of the Plaintiff States have adopted retention policies grounded in similar principles.” Malkiewicz Rep. at ¶ 22.</p> <p>Google’s data management policies are “normal and sensible” under the principles set forth by The Sedona Conference. Malkiewicz Rep. at ¶ 23.</p> <p>“I understand that many of the Plaintiff State ... have admitted that they similarly do not automatically enforce the preservation of all chat conversations.” Malkiewicz Rep. at ¶ 26.</p> <p>With respect to Google’s 2020 change in the retention period for new Google Chat rooms from indefinite to 18 months; “changes in data policies of this nature were not uncommon in this timeframe.” Malkiewicz Rep. at ¶ 28.</p>

Challenged Grande Opinions	Cited Malkiewicz Opinions
<p>“The Malkiewicz Report’s opinion that it is normal and sensible for companies to have data management policies that permit routine deletion of data, and thus Google did not violate any preservation obligations, is incorrect.” Grande Rep. § VIII, ¶¶ 70–75</p> <p>Google specifically argues the following are “new,” although they do not appear in § VIII:</p> <p>“When a company anticipates an investigation or litigation, they have a duty to turn off any auto- delete procedures that could delete relevant information for any potential custodians and this directive does not just apply to emails, but also to messaging applications such as Google Chat.” ¶ 61.</p> <p>“It is my opinion that Google attempted to undermine the investigations and cases that were starting to form, including this litigation. ...” ¶ 67.</p>	<p>Prof. Hochstetler’s suggestions “that Google’s information governance practices are unusual or cannot be explained by Google’s business judgment alone ... lack basis.” Google’s “information governance practices are widespread” and “many Plaintiff States have adopted similar.” Malkiewicz Rep. at ¶ 21.</p>
	<p><i>Additional Malkiewicz Opinions that Grande’s § VIII and ¶¶ 61, 67 Explain, Repel, Counteract, or Disprove</i></p>
	<p>Google’s data management policies are “normal and sensible” under the principles set forth by The Sedona Conference. Malkiewicz Rep. at ¶ 23.</p> <p>Many of the agreed-upon custodians in this case “were placed on hold <i>after</i> ... the beginning of 2022” and “Google placed many employees on hold (and thus suspended normal preservation processes for their documents), even if they were not agreed-upon custodians in this case.” Malkiewicz Rep. at ¶ 20.</p> <p>“Beginning in September 2019, Google issued litigation hold notices to numerous Googlers. ... Googlers [were instructed] to ‘not use’ Google Chat or any other ‘messaging apps to discuss any topics covered’ by their legal holds, but that, if they ‘must do so,’ to ‘make sure the settings preserve the messages, such as switching ‘history on.’” Malkiewicz Rep. at ¶ 31.</p> <p>“Many of the Plaintiff States have adopted retention policies grounded in similar principles” and “similarly do not automatically enforce the preservation of all chat conversations.” Malkiewicz Rep. at ¶¶ 22-26.</p> <p>Changes like Google’s 2020 change in the retention period for new Google Chat rooms from indefinite to 18 months are “not uncommon.” Malkiewicz Rep. at ¶ 28.</p>

Challenged Grande Opinions	Cited Malkiewicz Opinions
<p>“The Malkiewicz Report’s opinion that the produced logs do not reflect those custodian’s typical messaging volume and thus should not be used to analyze Google’s potential spoliation, is incorrect.” Grande Rep. § XII, ¶¶ 96–97.</p> <p>Google specifically argues the following are “new”:</p> <p>“[I]t is my opinion that the logs do reflect those five custodians Google Chat usage ... and that, in my experience, a two-month period of Chat usage that covers weekends and holidays is sufficient to show how Google employees used Google Chats.” ¶ 96</p> <p>“Google could have maintained this log for a longer period or even maintained it indefinitely ... By failing to preserve or create a sufficient Google Chat metadata log, Google has further prejudiced the Plaintiffs.” ¶ 97</p>	<p>“In my experience, if there is available a superior or otherwise more reliable source of data [than the <i>Play</i> Logs] (e.g., sworn testimony or independent research studies), that data source should be used over—or at least in conjunction with and as a check on—less reliable alternatives to inform the assumptions concerning one’s analyses. Using more reliable forms of data reduces the risk of errors, and ensures that one’s conclusions are more accurate and credible.” Malkiewicz Rep. at ¶ 45.</p>
	<p><i>Additional Malkiewicz Opinions that Grande’s § XII Explains, Repels, Counteracts, or Disproves</i></p> <p>“As further described below, the 5-person sample used by Prof. Hochstetler is biased and small, and thus not representative of all the agreed upon custodians subject to a litigation hold at the beginning of 2022. Therefore, the conclusions that Prof. Hochstetler draws from it are not reliable.” Malkiewicz Rep. at ¶ 40.</p> <p>“The <i>Play</i> Logs Represent an Unreliable Sample of Convenience.” Malkiewicz Rep. § XVI.A.ii, ¶¶ 10(d), 40-43.</p> <p>“This sample [(the <i>Play</i> Logs)], on which Prof. Hochstetler relies, is a biased sample of convenience that is not representative of the larger population of employees (who are subject to a litigation hold). Thus, it is my opinion that the sample used by Prof. Hochstetler is not a proper basis to extrapolate and the result of any such extrapolation is unreliable.” Malkiewicz Rep. at ¶ 44.</p> <p>Plaintiffs have received the benefit of 202 custodians agreed across this case. Malkiewicz Rep. at ¶ 18.</p>

Challenged Grande Opinions	Cited Malkiewicz Opinions
<p>“The Malkiewicz Report’s opinion that Google employees did not use Google Chats for business-related communications is incorrect.” § XIII, ¶¶ 98–100.</p> <p>Google specifically argues the following is “new”:</p> <p>“[I]t is evident from the production and from employee testimony that a great deal of business- related communications at Google take place on Google Chat, including substantive business communications relevant to the allegations in this case.” ¶ 99.</p>	<p>Prof. Hochstetler’s opinion “that a substantial percentage of chat conversations ‘had chat history turned off at least for some time during the timeframe covered by the Log Dataset ... ignores the substantial evidence in the record regarding the ways in which Google employees use the Chat tool ... I consider his characterization of the Chat tool as being ‘used internally throughout Google for business-related communication’ to be misleading or at best critically incomplete” Malkiewicz Rep. at ¶ 10.j.</p>
	<p><i>Additional Malkiewicz Opinions that Grande’s § XIII Explains, Repels, Counteracts, or Disproves</i></p>
	<p>“Googlers use Chat to discuss a range of non-business topics, such as birth announcements, making lunch plans, and sending congratulatory or birthday wishes.” Malkiewicz Rep. at ¶ 12.</p> <p>“Prof. Hochstetler’s Analysis Does Not Account for the Way Googlers Use Chat ... Aside from discussing substantive business, Googlers also use Chat for many other purposes.” Malkiewicz Rep. § VI.B.ii., ¶ 47.</p> <p>“Prof. Hochstetler’s analysis omits the fact that Googlers’ litigation holds instructed them not to use Chat to discuss topics covered by the litigation hold. This omission compounds the flaws I noted above in Section VI.B.ii: not only do many Googlers use Chat to discuss nonbusiness-related topics even in the ordinary course of their workdays, but Googlers were also specifically instructed not to use Chat to discuss topics relevant to this litigation.” Malkiewicz Rep. at ¶ 59.</p>

	<p>Google employees' deposition testimony "showed that they had an understanding of, and compliance with, the instructions given in the litigation holds as they pertain to Chat." Malkiewicz Rep. at ¶ 62.</p> <p>"... I conclude that the messages sent by the custodian did not meet the production criteria in this case." Malkiewicz Rep. at ¶ 76.</p> <p>"There is evidence in the record that custodians understood their obligations and that history could be switched off to have, for example, a personal conversation. Accordingly, Prof. Hochstetler's conclusion that 'these conversations, which are pertinent to this litigation, were generally impacted by the loss of message history, meaning that relevant past messages were not retained or produced' is wrong." Malkiewicz Rep. at ¶¶ 87-88.</p>
--	--

Challenged Grande Opinions	Cited Malkiewicz Opinions
<p>“The Malkiewicz Report’s opinion that the fact that the alleged conduct in the <i>Epic</i> case is different from the alleged conduct in this case means that the analysis of the produced logs should be discounted is incorrect.” Grande Rep. § XVI, ¶ 116.</p> <p>Google specifically argues the following is “new”:</p> <p>“[I]t is my opinion that it is appropriate for Professor Hochstetler to use the data in the logs that were made available to the Plaintiffs.” ¶ 116</p>	<p>“The ‘<i>Play</i> logs’ that are the subject of Prof. Hochstetler’s report are a subset of logs produced in the <i>Play</i> case. The <i>Play</i> logs were not intended to measure the frequency with which any users toggled ‘history on’ or ‘history off’. Rather, the <i>Play</i> logs were used for internal debugging purposes. The fields included in the debugging log include the time a message was sent, the unique user ID of the Google employee sending the message, the ‘space_id’ that identifies a Chat conversation or thread, and ‘actions,’ one of which corresponds to a user changing their history setting. But the <i>Play</i> logs do not show the contents of any Chat messages. Prof. Hochstetler concedes that the <i>Play</i> logs are not exhaustive and do not appear to capture all Chat messages.” Malkiewicz Rep. at ¶14.</p>
	<p><i>Additional Malkiewicz Opinions that Grande’s § XVI Explains, Repels, Counteracts, or Disproves</i></p>
	<p>“Prof. Hochstetler ... has defined relevance to include documents produced in a different litigation that were explicitly ‘unrelated to any party’s claim or defense in this action. By relying on chat logs—that were produced in a different litigation (with few overlapping custodians)—and ignoring other instances where chat history may have been appropriately turned on or off, Prof. Hochstetler has introduced a selection bias that renders his conclusion unreliable.” Malkiewicz Rep. at ¶ 10.k.</p> <p>“[E]ven assuming the truth of Prof. Hochstetler’s analysis of the <i>Play</i> logs, the conclusions that he draws from that analysis are unreliable and undermined by the content and characteristics of</p>

	<p>the chat conversations produced in the case.” Malkiewicz Rep. at ¶ 10.1.</p> <p>“The plaintiffs in the <i>Play</i> case alleged that Google monopolized the Android mobile app distribution market and did not make allegations concerning advertising, let alone Google’s ad tech products. This is very different from the conduct at issue in this case.” Malkiewicz Rep. at ¶ 13.</p> <p>“As further described below, the 5-person sample used by Prof. Hochstetler is biased and small, and thus not representative of all the agreed upon custodians subject to a litigation hold at the beginning of 2022. Therefore, the conclusions that Prof. Hochstetler draws from it are not reliable.” Malkiewicz Rep. at ¶ 40.</p> <p>“The <i>Play</i> Logs Represent an Unreliable Sample of Convenience.” Malkiewicz § XVI.A.ii, ¶¶ 40-43.</p> <p>“This sample [(the <i>Play</i> Logs)], on which Prof. Hochstetler relies, is a biased sample of convenience that is not representative of the larger population of employees (who are subject to a litigation hold). Thus, it is my opinion that the sample used by Prof. Hochstetler is not a proper basis to extrapolate and the result of any such extrapolation is unreliable.” Malkiewicz Rep. at ¶ 44.</p>
--	--

Challenged Grande Opinions	Cited Malkiewicz Opinions
<p>“The Malkiewicz Report’s opinion that any messages sent by custodians that were not produced in this case are not relevant, and any time that a custodian turned history off meant the Chat was not relevant, and thus History Off had no impact on Chat retention, is incorrect.” Grande Rep. § XVIII, ¶¶ 121-134.</p> <p>Google specifically argues the following are “new”:</p> <p>“It is my opinion, especially based upon the Google Chat messages that I have reviewed that there were many Google Chat messages that were likely sent with History Off that were in fact likely relevant.” ¶ 122.</p> <p>“Google has gotten in trouble in several ongoing and recent litigation matters for spoliating chats and improperly marking non-privileged material as privileged to withhold it from production.” ¶ 124.</p> <p>“The records retention policy that Google put in place regarding Google Chats was simply not sufficient. At Google, there was no automatic retention of Google Chats for litigation hold recipients.” ¶ 128.</p> <p>“It is my opinion that the History On-Off indicators were incredibly confusing.” ¶ 131.</p> <p>“While Google did implement litigation holds for email data, it also guided its employees to find ways to not put in writing potentially response antitrust discussions ” ¶ 132.</p>	<p>“... I conclude that the messages sent by the custodian did not meet the production criteria in this case.” Malkiewicz Rep. at ¶ 76.</p> <p>“Prof. Hochstetler fails to note, however, that the Log Dataset reflects that an additional 14 messages were sent by Mr. Pichai in this group between February 8, 2023 and February 14, 2023. These messages were retained but not produced because these chat messages did not meet production parameters in this case. This further undermines Prof. Hochstetler’s conclusion that other messages in the same group must have been ‘relevant to this litigation.’” Malkiewicz Rep. at ¶ 82.</p> <p>In light of the above, the more plausible explanation for the fact that history is switched off at various times is that the nature of the discussion did not pertain to matters relevant to this litigation. There is evidence in the record that custodians understood their obligations and that history could be switched off to have, for example, a personal conversation. Malkiewicz Rep. at ¶ 87.</p> <p>Accordingly, Prof. Hochstetler’s conclusion that “these conversations, which are pertinent to this litigation, were generally impacted by the loss of message history, meaning that relevant past messages were not retained or produced” is wrong. Malkiewicz Rep. at ¶ 88.</p> <p>Prof. Hochstetler’s hypothetical that he says “demonstrates how changing the Retention Setting impacts message retention’ ... is misleading and speculative.” Malkiewicz Rep. at ¶ 92.</p> <p>“Google produced no Chat messages for this period [from Sundar Pichai], suggesting that none of the conversations met the</p>

<p>“It is also my opinion that Google’s default Chat History “off” retention setting is not aligned with information governance and document retention industry standards and practices.” ¶ 133.</p>	<p>established production criteria. While Prof. Hochstetler speculates that Mr. Pichai did not retain messages relevant to this litigation, an alternative explanation, consistent with his testimony, would be that he complied with the litigation holds, and none of his conversations during this period were relevant to the issues in this case.” Malkiewicz Rep. at ¶ 101.</p>
	<p><i>Additional Malkiewicz Opinions that Grande’s § XVIII Explains, Repels, Counteracts, or Disproves</i></p>
	<p>Prof. Hochstetler’s opinion “that a substantial percentage of chat conversations ‘had chat history turned off at least for some time during the timeframe covered by the Log Dataset ... ignores the substantial evidence in the record regarding the ways in which Google employees use the Chat tool ... I consider his characterization of the Chat tool as being ‘used internally throughout Google for business-related communication’ to be misleading or at best critically incomplete” Malkiewicz Rep. at ¶ 10.j.</p> <p>“Prof. Hochstetler’s analysis omits the fact that Googlers’ litigation holds instructed them not to use Chat to discuss topics covered by the litigation hold. This omission compounds the flaws I noted above in Section VI.B.ii: not only do many Googlers use Chat to discuss nonbusiness-related topics even in the ordinary course of their workdays, but Googlers were also specifically instructed not to use Chat to discuss topics relevant to this litigation.” Malkiewicz Rep. at ¶ 59.</p> <p>“The above-referenced log entries correspond to a chat conversation that was preserved but not produced in this litigation</p>

because it did not meet production parameters.” Malkiewicz Rep. at ¶ 86.

“These low implied responsiveness rates suggest that only a small fraction of the chat messages sent during this period met the production criteria. ... The limited number of produced messages compared to the expected total volume underscores the irrelevance of many Chats. The low implied responsiveness rates support the conclusion that Prof. Hochstetler’s assumptions about the retention and relevance of messages are overly broad, as the vast majority of messages logged during the analyzed period did not meet the criteria for production. This further undermines his assumption that relevant messages were lost due to retention settings.” Malkiewicz Rep. at ¶¶ 102-103; *see also* Malkiewicz Rep. at p. 36, Exhibit 3 (chart estimating that maximum 15.2% responsiveness rate for any of the five custodians’ Chats).